

two copies (maternal + paternal) of a fragment with several polymorphisms

M:
P:

heterozygous polymorphisms

homozygous polymorphism

Fig. 1

two copies (maternal + paternal) of a fragment with several polymorphisms

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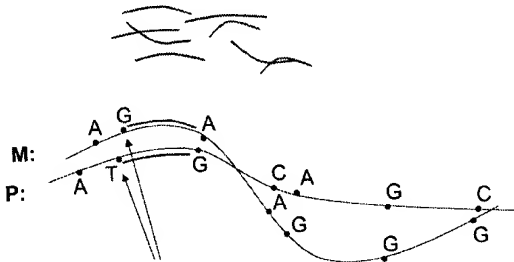
M:
P:

heterozygous polymorphisms

homozygous polymorphism

Fig. 1

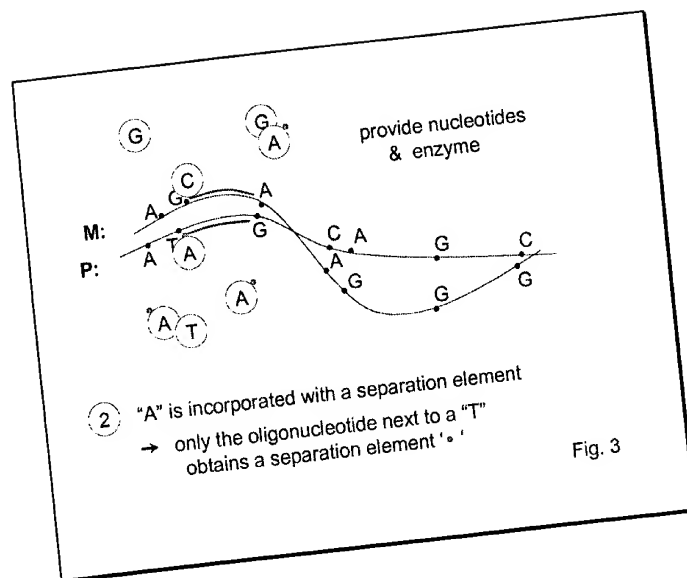
add oligonucleotides targeting a polymorphic site:

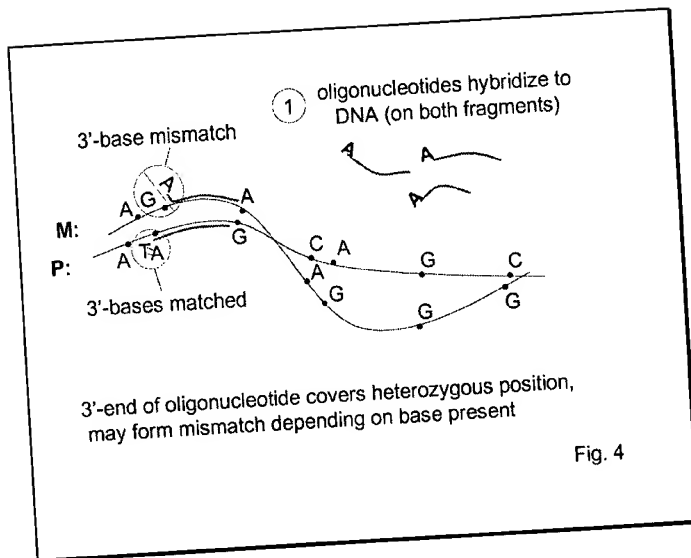


① oligonucleotides hybridize next to a heterozygous site (on both fragments)

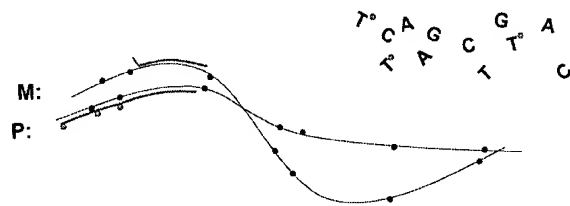
Fig. 2

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provide nucleotides, including modified ones with a separation element: 'o'



② enzymatic elongation of oligonucleotide with separation element only if no mismatch present

Fig. 5

1. The first step in the process is the binding of the DNA template to the polymerase. This is followed by the binding of the primer and the subsequent elongation of the new strand. The process is highly accurate, with a proofreading mechanism that corrects errors. The final product is a double-stranded DNA molecule, which can then be used for various applications, such as cloning or sequencing.

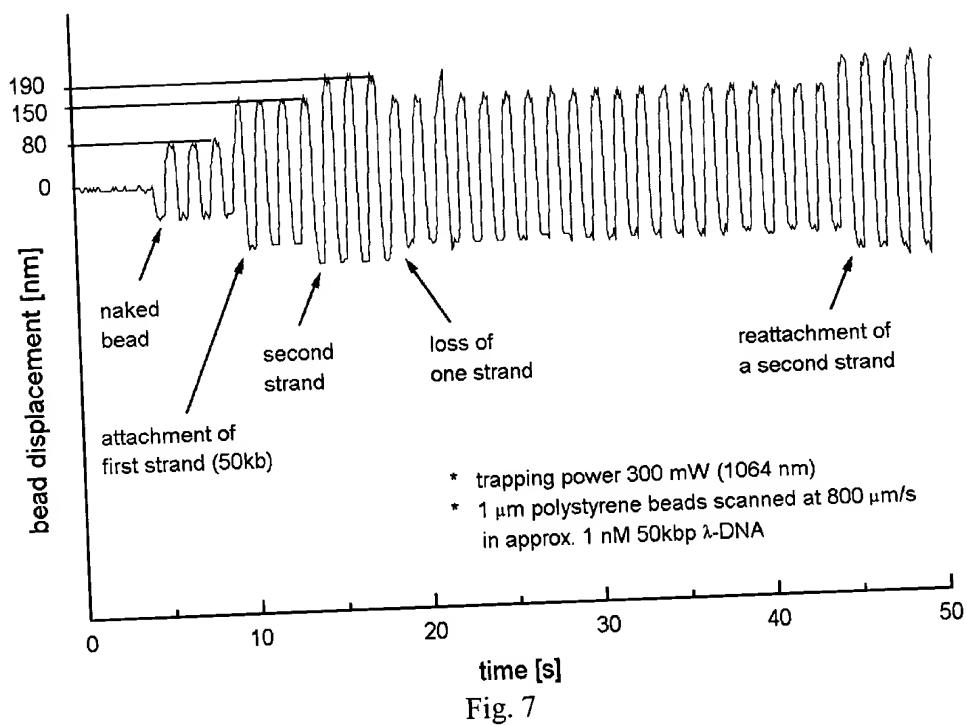


Fig. 7

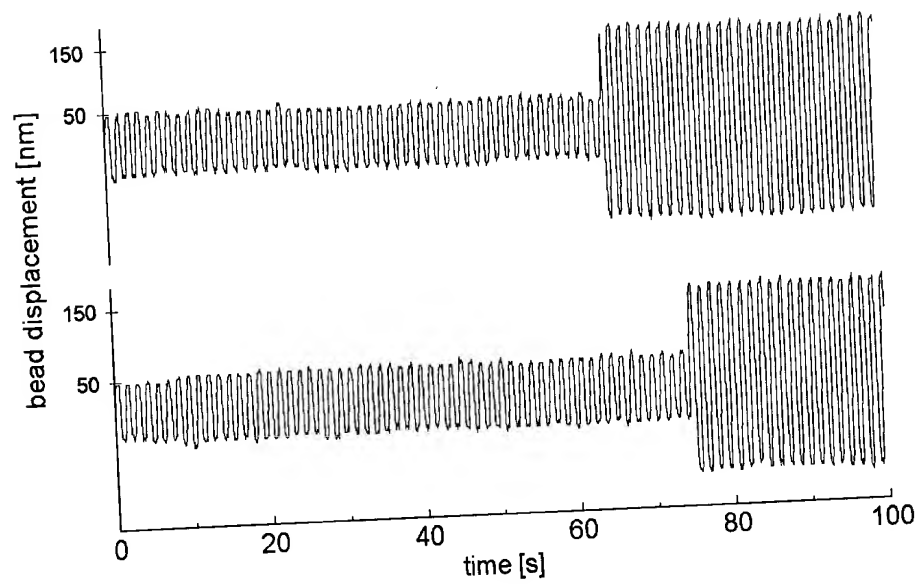
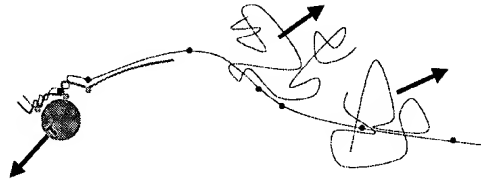


FIG. 8

- ③ extract targeted fragment through
separation element bound to solid support



multiple separation elements topologically
lock target fragment to solid support

Fig. 9

with very strong binding capacity, the separation element is highly porous and has a large surface area. The separation element is made of a material that is compatible with the sample and the solid support. The separation element is used to separate the target fragment from the solid support. The separation element is made of a material that is compatible with the sample and the solid support. The separation element is used to separate the target fragment from the solid support.

Multiplexing - first order:
different oligonucleotides extract different fragments
based on same type of polymorphism (here: "T")

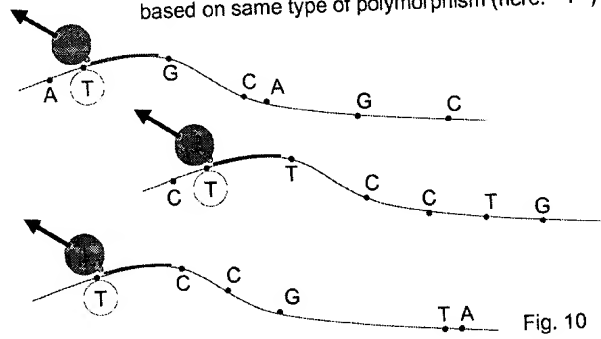
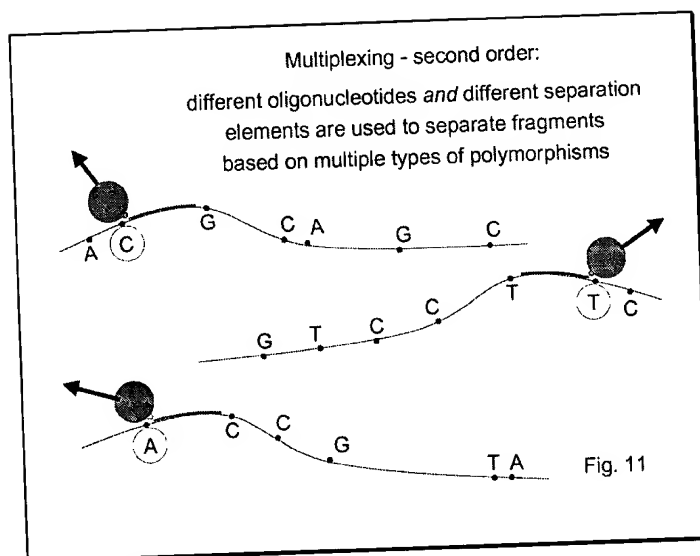


Fig. 10

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